

Use of Artificial Neural Networks in Determining Domestic Violence Predictors

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Abstract.

This paper aims to determine the predictors of violence against women by their partners, according to the National Survey of Demography and Health - ENDS - Colombia, 2017 using artificial neural networks. The results indicate that the best forecasting model found is the artificial neural network, perceptron model, multilayer associative memory with a hidden layer of 20 units, through functions of sigmoidal activation and sum of square of the error as error function. The ten main explanatory variables are: respect for human rights of the partner, respect for wishes, love expressed by the partner, a history of domestic violence, engaging in joint decision making, decision of contraceptive use, number of connections (partners) of the respondent, decision-making at the financial level, correction of children behavior, and decisions regarding women's health at home.

Keywords: Artificial neural network, multilayer perceptron, domestic violence.